

PAT-NO: JP02006040940A  
DOCUMENT-IDENTIFIER: JP 2006040940 A  
TITLE: METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE  
PUBN-DATE: February 9, 2006

# INVENTOR-INFORMATION:

NAME	COUNTRY
IWABUCHI, TAKAYUKI	N/A
KAWASAKI, HISAO	N/A

# ASSIGNEE-INFORMATION:

NAME	COUNTRY
TOSHIBA CORP	N/A

APPL-NO: JP2004214435  
APPL-DATE: July 22, 2004

INT-CL-  
ISSUED:

TYPE IPC DATE IPC-OLD

# ABSTRACT:

PROBLEM TO BE SOLVED: To provide a method of manufacturing a semiconductor device which has good electrical characteristic and improves a yield.

SOLUTION: The method of manufacturing the semiconductor device includes a first step of depositing a first insulating film 15 on a semiconductor substrate 10 having an electron supply layer 13 and a cap layer 14, a second step of forming a resist film 16 on the semiconductor substrate 10, a third step of forming an opening 16a in the resist film 16, a fourth step of forming an opening 15a by etching the first insulating film 15 through the opening 16a, a fifth step of releasing the resist film 16, a sixth step of forming an opening 14a by etching the electron supply layer 13 and selectively the cap layer 14 through the opening 15a of the first insulating film 15, a seventh step of depositing a thick second insulating film 17 without blocking the opening 14a of the cap layer 14, an eighth step of exposing the electron supply layer 13 by etch-back processing the second insulating film 17, a ninth step of etching the electron supply layer 13 to a predetermined depth with the second insulating film 17 as a mask, and a tenth step of forming a gate metal 20 on the electron supply layer 13.

